AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A spread code allocation method in a CDMA cellular network, comprising the steps of:

having a first code set including a plurality of first codes and a second code set including one or a plurality of second codes,

allocating the second code to said first code set and multiplying said plurality of first codes by said second codes allocated to generate a plurality of combined codes,

assigning a priority to each of said combined codes,

allocating said combined code to said transmission signal based on said priority for each transmission signal to be transmitted from a base station to a mobile station, and

spreading said transmission signal by the assigned combined code to transmit said transmission signal to said mobile station,

wherein determining a priority of said combined code for each transmission signal is based on a channel quality value measured by said mobile station.

2. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the step of,

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed.

3. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the steps of:

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed, and

setting a priority to said second code according to said channel quality value and setting a priority of said combined code to be higher as said second code attains a higher priority.

4. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the steps of:

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed,

setting a priority to said second code according to said channel quality value and setting a priority of said combined code to be higher as said second code attains a higher priority, and

providing the axis of a channel quality value representing said channel quality value and dividing the axis of a channel quality value by a plurality of threshold values to set a channel quality value within the same value area among a plurality of value areas generated by the division by said threshold values to have the same priority of said second code.

5. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the steps of:

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed, and

setting a priority to said first code and setting a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority.

6. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the steps of:

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed,

setting a priority to said first code and setting a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority, and

providing an axis of a channel quality value representing said channel quality value and dividing the axis of a channel quality value by a plurality of threshold values to set a channel quality value within the same value area among a plurality of value areas generated by the division by said threshold values to have the same priority of said first code.

7.-14. (Canceled)

15. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

said mobile station measures a channel quality value and informs said base station of said channel quality value, and

said base station checks the number of times each second code is used by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code.

16. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

said mobile station measures a channel quality value and informs said base station of said channel quality value,

said base station checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code, and which further comprises the steps of:

when said channel quality value is not less than a quality threshold value, setting a higher priority of a combined code that includes a second code whose said number of uses of each second code by said combined code is smaller, and

when said channel quality value is less than said quality threshold value, setting a priority of a combined code to be higher that includes a second code whose said number of uses of each second code by said combined code is larger.

17. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

said mobile station measures a channel quality value and informs said base station of said channel quality value,

said base station checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code, and which further comprises the step of:

setting a priority to said first code and setting a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority.

18. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

said transmission signal includes a common control signal.

19. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

said transmission signal includes a common control signal, and

to said common control signal, a combined code having he highest priority is allocated.

20. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the step of,

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed, wherein

an interference signal power is taken as said channel quality value.

21. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the step of,

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed, wherein

a reception power of said common control signal is taken as said channel quality value.

22. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the step of,

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station,

determining a priority of said combined code based on said channel quality value informed, wherein

a power ratio of a desired signal to an interference signal is taken as said channel quality value.

23. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, further comprising the step of:

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value and at said base station, determining a priority of said combined code based on said channel quality value informed, wherein

a power ratio of a desired signal to an interference signal is taken as said channel quality value, and further comprising the step of:

checking a reception power of a common control signal sent out from a base station being connected to at least one of said mobile stations and a reception power of said common control signal sent out from a base station not being connected to any of said mobile stations to calculate a power ratio of a desired signal to an interference signal from a ratio of a reception power corresponding to said base station being connected to a reception power corresponding to said base station not being connected.

24. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

as said first code set, a orthogonal code is used.

25. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 1, wherein

as said second code set, a gold code or a part of the gold code is used.

26. (Previously Presented) A base station in a CDMA cellular network, comprising:

a first code set including a plurality of first codes and a second code set including one or a plurality of second codes,

means for allocating said second code to said first code set and multiplying said plurality of first codes by said second code allocated to generate a plurality of combined codes,

means for assigning a priority to said combined code for each transmission signal to be transmitted from a base station to a mobile station,

means for allocating said combined code to said transmission signal based on said priority, and

means for diffusing said transmission signal by the allocated combined code to transmit said transmission signal diffused to said mobile station,

wherein said base station determines a priority of said combined code for each transmission signal based on a channel quality value measured by said mobile station.

27. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations to determine a priority of said combined code based on said channel quality values informed.

28. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations to determine a priority of said combined code based on said channel quality values informed, and

sets a priority to said second code according to said channel quality value and sets a priority of said combined code to be higher as said second code attains a higher priority.

29. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations to determine a priority of said combined code based on said channel quality values informed,

sets a priority to said second code according to said channel quality values and sets a priority of said combined code to be higher as said second code attains a higher priority, and provides an axis of a channel quality value representing said channel quality value and divides the axis of a channel quality value by a plurality of threshold values to set a channel quality value within the same value area among a plurality of value areas generated by the division by said threshold values to have the same priority of said second code.

30. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations and determines a priority of said combined code based on said channel quality values informed, and

sets a priority to said first code according to said channel quality value and sets a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority.

31. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations and determines a priority of said combined code based on said channel quality values informed,

sets a priority to said first code according to said channel quality value and sets a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority, and

provides an axis of a channel quality value representing said channel quality value and divides the axis of a channel quality value by a plurality of threshold values to set a channel quality value within the same value area among a plurality of value areas generated by the division by said threshold values to have the same priority of said first code.

32.-36. (Canceled)

37. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of a channel quality value measured at said mobile station, and

checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code.

38. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of a channel quality value measured at said mobile station,

checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code,

when said channel quality value is not less than a quality threshold value, sets a priority of a combined code to be higher that includes a second code whose said number of uses of each second code by said combined code is smaller, and

when said channel quality value is less than said quality threshold value, sets a priority of a combined code to be higher that includes a second code whose said number of uses of each second code by said combined code is larger.

39. (Previously Presented) The base station in a CDMA cellular network as set forth in claim 26, wherein

said base station is informed of a channel quality value measured at said mobile station, checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code, and

sets a priority to said first code and sets a priority of each combined code in a group of combined codes including the same second code to be higher as said first code attains a higher priority.

40. (Canceled)

41. (Currently Amended) The spread code allocation method in a CDMA cellular network ~~as set forth in claim 40, further~~ comprising:

having a first code set including a plurality of first codes and a second code set including one or a plurality of second codes,

allocating the second code to said first code set and generating a pair of said first code and said second code allocated,

assigning a priority based on channel availability to each of said pair of said first code and said second code allocated for each transmission signal to be transmitted from a base station to a mobile station,

allocating said pair of said first code and said second code allocated to said transmission signal based on said priority,

spreading said transmission signal by the assigned pair of said first code and said second code allocated, and

transmitting said transmission signal spread to said mobile station, wherein

at a plurality of said mobile stations, measuring a channel quality value and informing said base station of said channel quality value, and

at said base station, determining a priority of said pair of said first code and said second code allocated based on said channel quality value informed.

42. (Previously Presented) The spread code allocation method in a CDMA cellular network as set forth in claim 41, further comprising:

setting a priority to said second code according to said channel quality value and setting a priority of said pair of said first code and said second code allocated to be higher as said second code attains a higher priority.

43. (Currently Amended) The spread code allocation method in a CDMA cellular network as set forth in claim [[40]] 41, further comprising:

checking the number of uses of each second code by a combined code including the same second code and determining a priority of said combined code based on said channel quality value informed and said number of uses of each second code at said base station.

~~grasping a transmission quality required amount required by a mobile station receiving each said transmission signal, and~~

~~determining a priority of said pair of said first code and said second code allocated based on said transmission quality required amount.~~

44.-45. (Canceled)

46. (Currently Amended) The CDMA cellular base station comprising: ~~as set forth in claim 45, wherein~~

a first code set including a plurality of first codes and a second code set including one or a plurality of second codes,

said base station

allocates the second code to said first code set and generating a pair of said first code and said second code allocated,

assigns a priority based on channel quality to each of said pair of said first code and said second code allocated for each transmission signal to be transmitted from a base station to a mobile station,

allocates said pair of said first code and said second code allocated to said transmission signal based on said priority,

spreads said transmission signal by the assigned pair of said first code and said second code allocated, and

transmits said transmission signal spread to said mobile station, wherein

said base station is informed of channel quality values measured at a plurality of said mobile stations, and

determines a priority of said pair of said first code and said second code allocated based on said channel quality values informed.

47. (Previously Presented) The CDMA cellular base station as set forth in claim 46, wherein

said base station sets a priority to said second code according to said channel quality value, and

sets a priority of said pair of said first code and said second code allocated to be higher as said second code attains a higher priority.

48. (Currently Amended) The CDMA cellular base station as set forth in claim [[45]] 46, wherein

said base station

checks the number of uses of each second code by a combined code including the same second code and determines a priority of said combined code based on said channel quality value informed and said number of uses of each second code. ~~grasps a transmission quality required amount required by a mobile station receiving each said transmission signal, and~~

~~determines a priority of said pair of said first code and said second code allocated based on said transmission quality required amount.~~

49. (Canceled)